

CLAIMS

1. A plate type speaker, comprising:

a base frame;

at least one magnetic body coupled to the base frame such that opposite polarities are provided at adjacent lateral positions and are spaced apart by a predetermined distance from each other;

a diaphragm;

at least one coil plate formed with a voice coil wound on either or both of sides thereof, said coil plate being inserted vertically into spaces between the opposite polarities of the magnetic body and connected to the diaphragm; and

a coil plate guide means coupled to the coil plate for guiding the position and vibration direction of the coil plate such that the coil plate is spaced from the magnetic bodies and vibrates vertically.

2. The plate type speaker as claimed in claim 1, wherein the base frame is configured to have open top and bottom portions, the diaphragm is coupled to an upper end of the coil plate, and the coil plate guide means is coupled to a lower end of the coil plate to function as another diaphragm.

3. The plate type speaker as claimed in claim 1, wherein the base frame has at least one opening formed in at least a portion of a bottom surface thereof corresponding to a lower end of the coil plate so that the lower end of the coil plate passes through the bottom surface of the base frame, and

the coil plate guide means comprises a fixing member formed to be flexible and coupled to the lower end of the coil plate and to the bottom surface of the base frame.

4. The plate type speaker as claimed in claim 3, wherein the fixing member is corrugated to have ridges and troughs along a longitudinal direction of the coil plate.

5. The plate type speaker as claimed in claim 3 or 4, wherein the fixing member is formed with through-holes.

6. The plate type speaker as claimed in any one of claims 1 to 4, wherein a plurality of the magnetic bodies with opposite polarities at upper and lower ends thereof are spaced apart by a predetermined distance from one another.

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7. The plate type speaker as claimed in claims 6, wherein each of the magnetic bodies comprises:

a permanent magnet with opposite polarities at upper and lower ends thereof;

an upper plate connected to the upper end of the permanent magnet; and

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a lower plate connected to the lower end of the permanent magnet and connected to a bottom surface of the base frame.

8. The plate type speaker as claimed in claim 6, wherein both opposite ends of the voice coil wound on either or both of the sides of the coil plate are positioned at levels of the upper and lower ends of the magnetic bodies, respectively.

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9. The plate type speaker as claimed in any one of claims 1 to 4, wherein the base frame is formed with at least one opening bored through a wall surface thereof.

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10. The plate type speaker as claimed in any one of claims 1 to 4, wherein said at least one magnetic body is formed to take the shape of a comb such that respective portions of the magnetic body with the opposite polarities have protrusions and depressions in a horizontal direction, the protrusions are inserted into the respective depressions with a predetermined gap therebetween, and the coil plate is formed to take the shape of a plate bent such that it can be vertically inserted into the spaces.

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11. The plate type speaker as claimed in any one of claims 1 to 4, a plurality of coil plates in the form of a flat panel are arranged in parallel.